Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Carrier Current Systems, including Broadband over Power Line Systems	)	ET Docket No. 03-104
	)	
Amendment of Part 15 regarding new requirements and measurement guidelines for Access Broadband over Power Line Systems	)	ET Docket No. 04-37

Comments of Paul F. Alexander

Date: May 3, 2004

Background to Comments

I have participated in a Broadband over Power Line (BPL) technology trial (as a consumer) at my home in Potomac, Maryland since December, 2002.

Comments

Measurement Bandwidth

The time and frequency domain characteristics of the Access BPL signals I have observed at my home indicate that the measurement bandwidth specified in 47 C.F.R. § 15.35(a) will not be appropriate for measuring the RF power radiated by Access BPL systems. Section 15.35(a) presently specifies* a 9 kHz measurement bandwidth for signals between 150 kHz and 30 MHz. Use of a 9 kHz measurement bandwidth when evaluating the level of RF energy radiated by Access BPL systems will result in significantly understating the true power radiated.

Because of Access BPL signals' relatively fast rise & fall times and short pulse durations these signals instantaneously occupy much more spectrum than a typical communication signal found below 30 MHz. It is therefore important to insure that measurements of radiated RF power from Access BPL are made in a bandwidth sufficient to give an accurate representation of the power actually radiated.

I recommend therefore that the radiated emissions measurement bandwidth for Access BPL systems using spectrum below 30 MHz be specified as 1 MHz.

* 47 C.F.R. § 15.35(a) refers to the measurement specifications contained in *Comite International Special des Perturbations Radioelectriques* (CISPR) Publication 16.

Detector Type

Because of the short pulse durations (and low duty cycles) of Access BPL signals it is important that only peak detectors of RF power be used for radiated power measurements of Access BPL systems. Use of quasi-peak detectors as presently permitted in Section 15.35(a) will also result in significantly understating the power radiated by Access BPL systems.

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